



# Spatial Solutions for Document and Information Management

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## Outline



**Why Spatial Access to Data and Documents?**

**What examples of an SE-EDMS are there?**

**(What are other Transportation organizations doing?)**

**Recommended approach to a SE-EDMS**



## Why Spatial Access to Data and Documents?



*Users' demand for **data access** is **high!***

- **Use a map to locate information**
  - ♦ Transportation orgs business interest cover large areas, spatial relationships often are the most efficient method to locate information.
- **Ease of access, intuitive, A map based interface allows for rapid location of information by less knowledgeable users.**
- **Data is available across the enterprise**
- **Technology is available**
  - ♦ Network technology allows connecting to the data
  - ♦ Database technology allows data sharing and integration
  - ♦ GIS technology **should pose** no data integration problems
  - ♦ EDMs today are easier to manage
  - ♦ Integration between spatial features and digital documents is technologically simple (spatial referencing systems)



## Spatial Referencing Systems – Methods Supported



### **Pick a point in the map**

- **Spatial Co-ordinate values in a Mapping Projection or Latitude and Longitude**


### **Pick a feature on the map**

- **Graphically Displayable Element**

### **Dynamically create a feature on the map**



- **Linear Referencing System "Route" and "Milepost Range"**



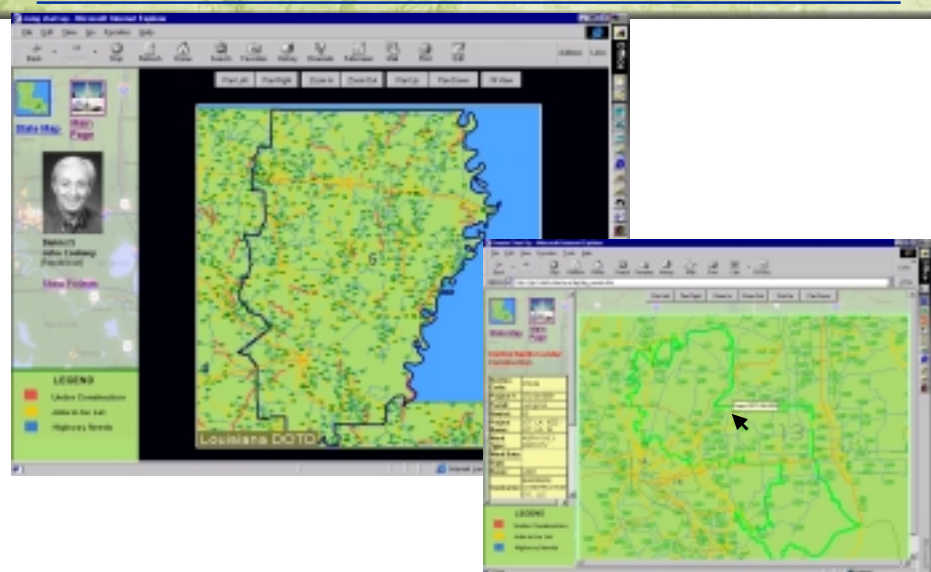


## Examples of SE-EMDS

- Using Web Technology
- Available Desktop/Web Technology

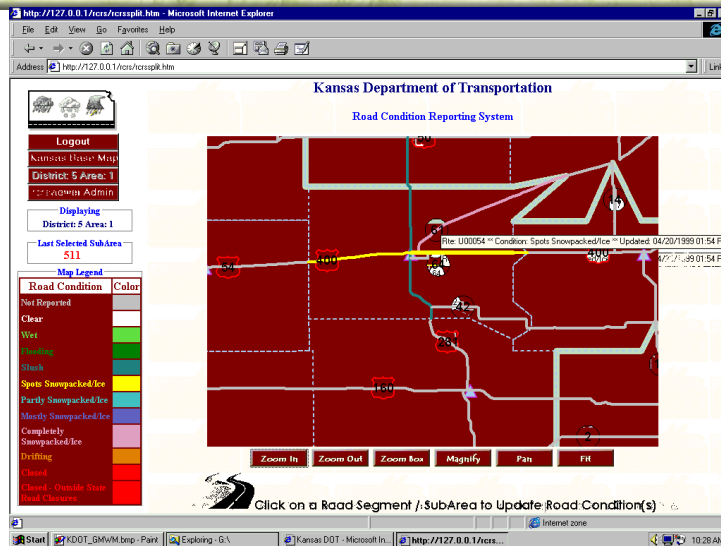


## Project Information - Louisiana DOT



## Road Conditions - Kansas DOT

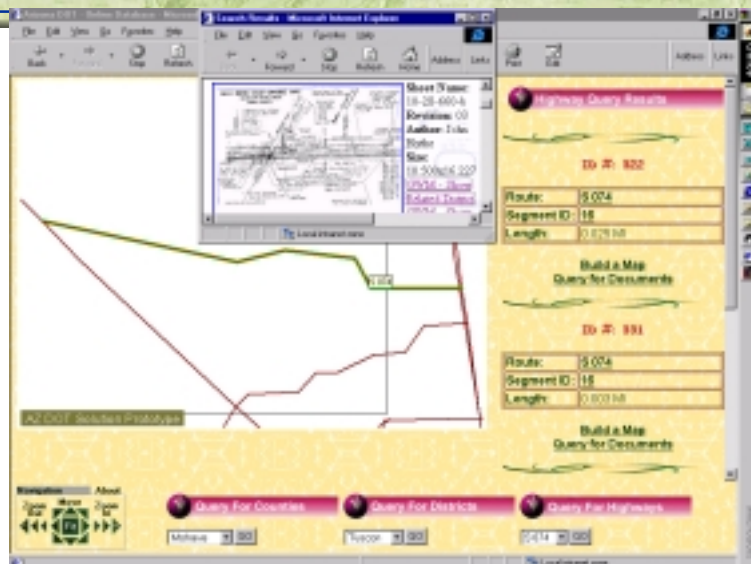
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## Drawing Access - Arizona DOT

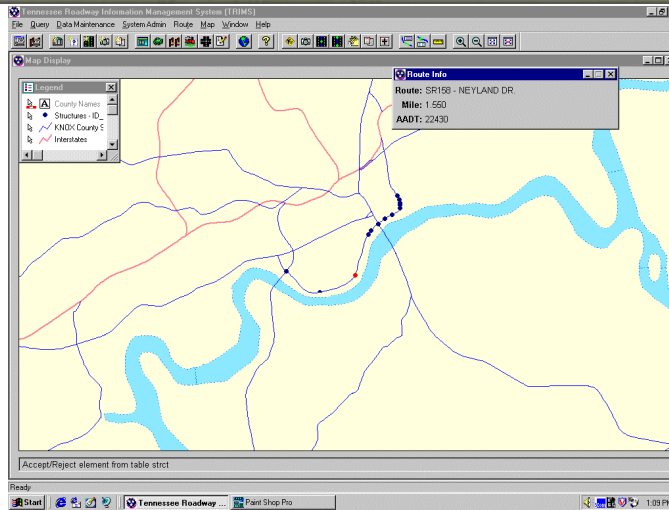
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# Asset Management - Tennessee DOT TRIMS

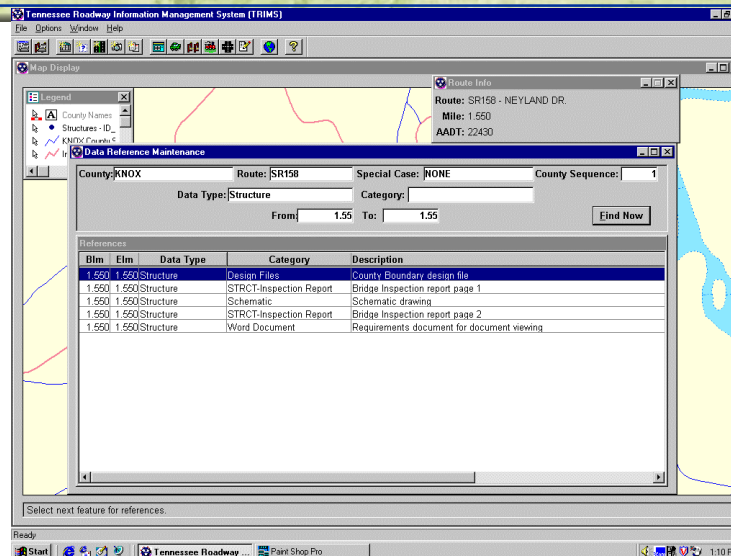
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# TRIMS - Asset identification

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## TRIMS - Related Document Access

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**Tennessee Roadway Information Management System (TRIMS)**

Map Display

**BRIDGE INSPECTION REPORT (CULVERTS)**

BRIDGE NO. 080A2270001 BRIDGE LOCATION NO. 08 - A227 - 0.11  
 ELEVATION DIST. NO. CO. ROAD LOS MILE

ROAD NAME OVER HOLLYS CREEK STREAM NAME STRUCTURE NAME (IF NAMED)  
 YEAR CONSTRUCTED 1928 COUNTY CANNON MAINTENANCE DISTRICT NO. 25  
 (Estimated [ ] of Actual [ ])

**FEATURES**

WEARING SURFACE--CONCRETE [X] ASPHALT [ ] (DEPTH--18 in.)  
 TIMBER [ ] GRAVEL [ ] (DEPTH--in.)  
 FLARED WIDTH--YES [ ] NO [ ]  
 MEDIAN WIDTH--OPEN [ ] NONE [ ] CLOSED [ ] (< 25 FT.)  
 BRIDGE SKW 75 LT [ ] RT [ ] UNDER ft. FILL NBYS LENGTH  
 DEPTH (ft.) (in.)

STRUCTURE TYPE C.B.S. BARS/ELS 2 @ 15 X 8' (ft.)  
 NO. SPAN DEPTH

WIDTH (" \*ft.)

DECK CUT-TO-OUT: AT 90° ALONG SKW 1. HATCHMAN  
 BRIDGE LENGTH: AT 90° ALONG RWAY C.L. 2. HOLT  
 ROADWAY: RAIL-TO-RAIL CUB-TO-CUB 3. JENSEN  
 APPROACH ROADWAY (NOT INCLUDING SHOULDER): 24' 4.  
 APPROACH SHOULDER: 2' RT 2' LT 5.  
 SIDEWALK: NCA RT NCA LT 6.  
 OTHER (EX: MEDIAN): 7.  
 8.

**STONING**

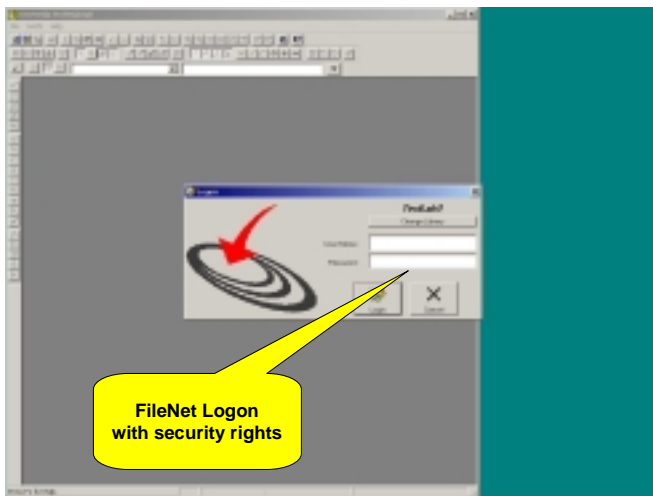
PACKLEBOARD--YES NO NEEDED WEIGHT LIMIT POSTED  
 BRIDGE NUMBER--[X] [ ] [ ] YES [ ] NO [X]  
 NARROW BRIDGE--[ ] [X] [ ] GROSS 2 AXLE TONS

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## SE-EDMS - “out of the box” Solution

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The user selects **Logon** and must enter a valid User Name and Password as defined by the EDMS security system.

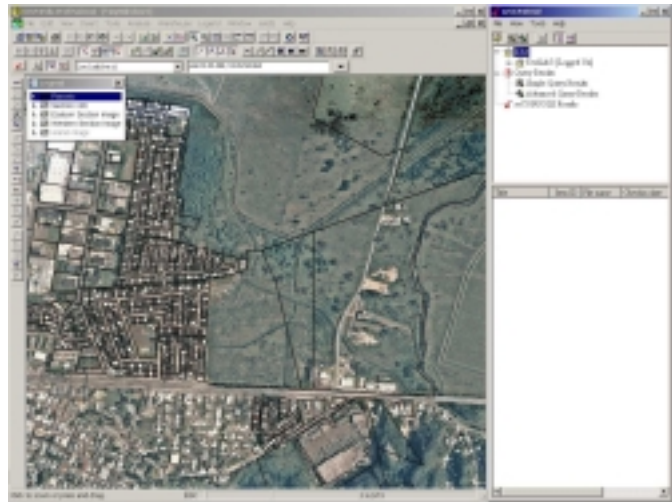


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## SE-EDMS - GIS-EDMS Integration



The GeoWorkspace is retrieved from FileNET and loaded into GeoMedia

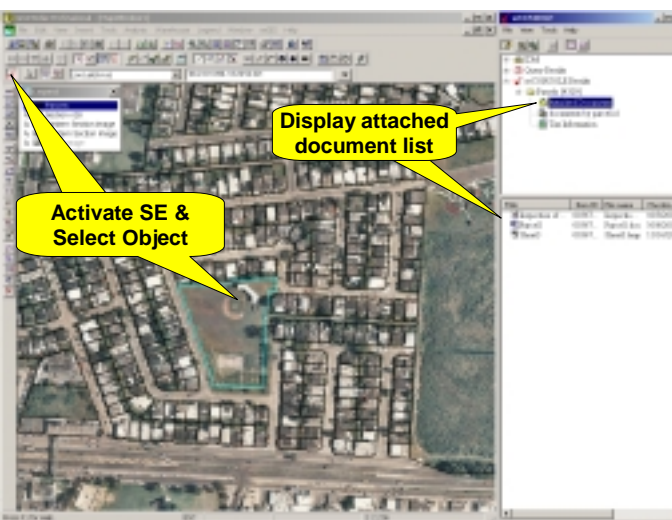


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## SE-EDMS - Pick the feature –find related docs



The user can activate the “sx icon” from tool bar and then locate any spatial object in the map window. This enables all documents that are attached, to be displayed in the document list box.

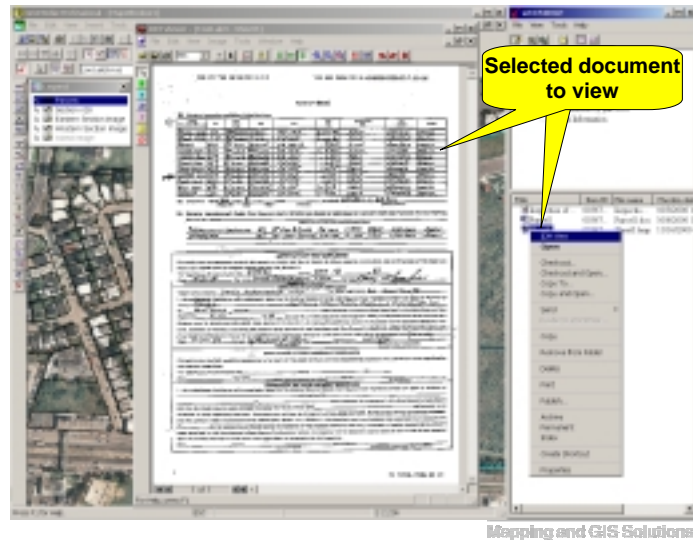


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## SE-EDMS - Display the related Documents



If a user has the appropriate security rights, they can open or view the document



## SE-EDMS - Recommendations



- Create an internal project team to research an SE-EDMS
- Pin point several candidate implementations that would benefit the organization
  - ◆ **Must be “in line” with the Enterprise Wide Vision for Information Sharing**
- Choose a systems integrator that knows your business
- Use a phased approach - start small and **viewing only**
  - ◆ **Choose a set of business processes, documents and data** to implement within an EDMS that can achieve measurable results in a single funding period
- Involve a small set of users – satisfy them first, then broaden
  - ◆ **A system developed without user participation, will not be used and the system will fail.**
- Develop and implement a Disaster Recovery Plan
- Internally promote the HECK out of the **SUCCESSFUL** system!





## Summary



**User Demand to access documents is HIGH!**

- We are a document centric world!

**Maps are intuitive everyone!**

**The technology is all available – today!**

**The integration of maps and documents provide a solution with mass appeal including:**

- productivity gains
- and significant cost savings

**Investigate a Spatially Enabled – EDMS TODAY!**



## Summary



**Thanks to:**

**LA DOTD**

**Kansas DOT**

**Arizona DOT**

**Tennessee DOT**

**Intergraph Government Solutions Division**

**[www.intergraph.com/govt](http://www.intergraph.com/govt)**

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